

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ROCKY POND	Lake Area (ha):	18.78
Town: HOLLIS	Maximum depth (m):	3.6
County: Hillsborough	Mean depth (m):	2.0
River Basin: Merrimack	Volume (m ³):	378000
Latitude: 42°46' N	Relative depth:	0.7
Longitude: 71°38' W	Shore configuration:	1.69
Elevation (ft): 454	Areal water load (m/yr):	5.44
Shore length (m): 2600	Flushing rate (yr ⁻¹):	2.70
Watershed area (ha): 216.0	P retention coeff.:	0.64
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

	5 February 1987	21 August 1986
DOM. PHYTOPLANKTON (% TOTAL) #1	SYNURA 68%	DINOBRYON 90%
#2	MALLAMONAS 27%	
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		1090.0
CHLOROPHYLL-A (µg/L)		6.25
DOM. ZOOPLANKTON (% TOTAL) #1	NAUPLIUS LARVAE 33%	POLYARTHRA 45%
#2	SYNCHAETA 26%	NAUPLIUS LARVAE 29%
#3		
ROTIFERS/LITER	33	126
MICROCRUSTACEA/LITER	39	97
ZOOPLANKTON ABUNDANCE (#/L)	78	223
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		3.4 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	7.1	9.0
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		< 10
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³): None

CHEMICAL:

Lake: ROCKY POND

Town: HOLLIS

	5 February 1987		21 August 1986		
DEPTH (m)	1.0	2.5	1.0		3.0
pH (units)	5.8	5.8	6.5		6.6
A.N.C. (Alkalinity)	1.3	2.3	2.0		2.1
NITRATE & NITRITE NITROGEN	0.02	0.02	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.53	0.60	0.33		0.30
TOTAL PHOSPHORUS	0.007	0.009	0.014		0.016
CONDUCTIVITY (μ mhos/cm)	20.4	24.3	19.8		20.1
APPARENT COLOR (cpu)	11	11	15		15
MAGNESIUM			0.30		
CALCIUM			1.1		
SODIUM			1.7		
POTASSIUM			0.30		
CHLORIDE	< 2	< 2	3		3
SULFATE	4	4			
TN : TP	79	69	24		19
CALCITE SATURATION INDEX			4.5		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1986

D.O. S.D. PLANT CHL TOTAL CLASS

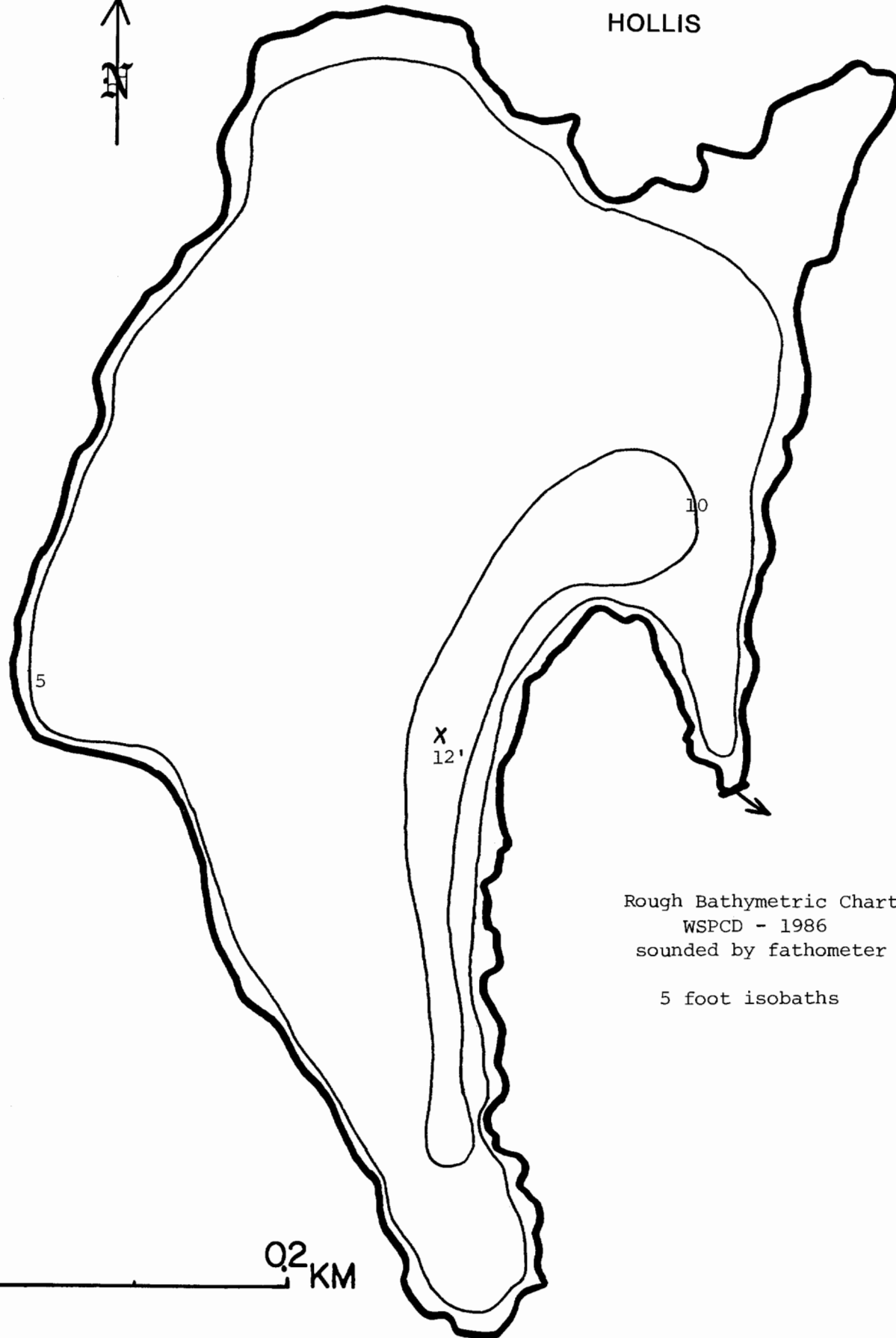
**	1	2	1	4	Meso.
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COMMENTS:

1. The whole-water phytoplankton was dominated by golden algae (50%) and greens (35%). Dinobryon (35%) and tiny green flagellates (30%) were the dominant genera.
2. Public access was a dirt launch site; parking available for 4 or 5 cars with trailers; launch site was adequate but shallow.
3. Not highly developed - less than 10 cottages along the shore.

ROCKY POND

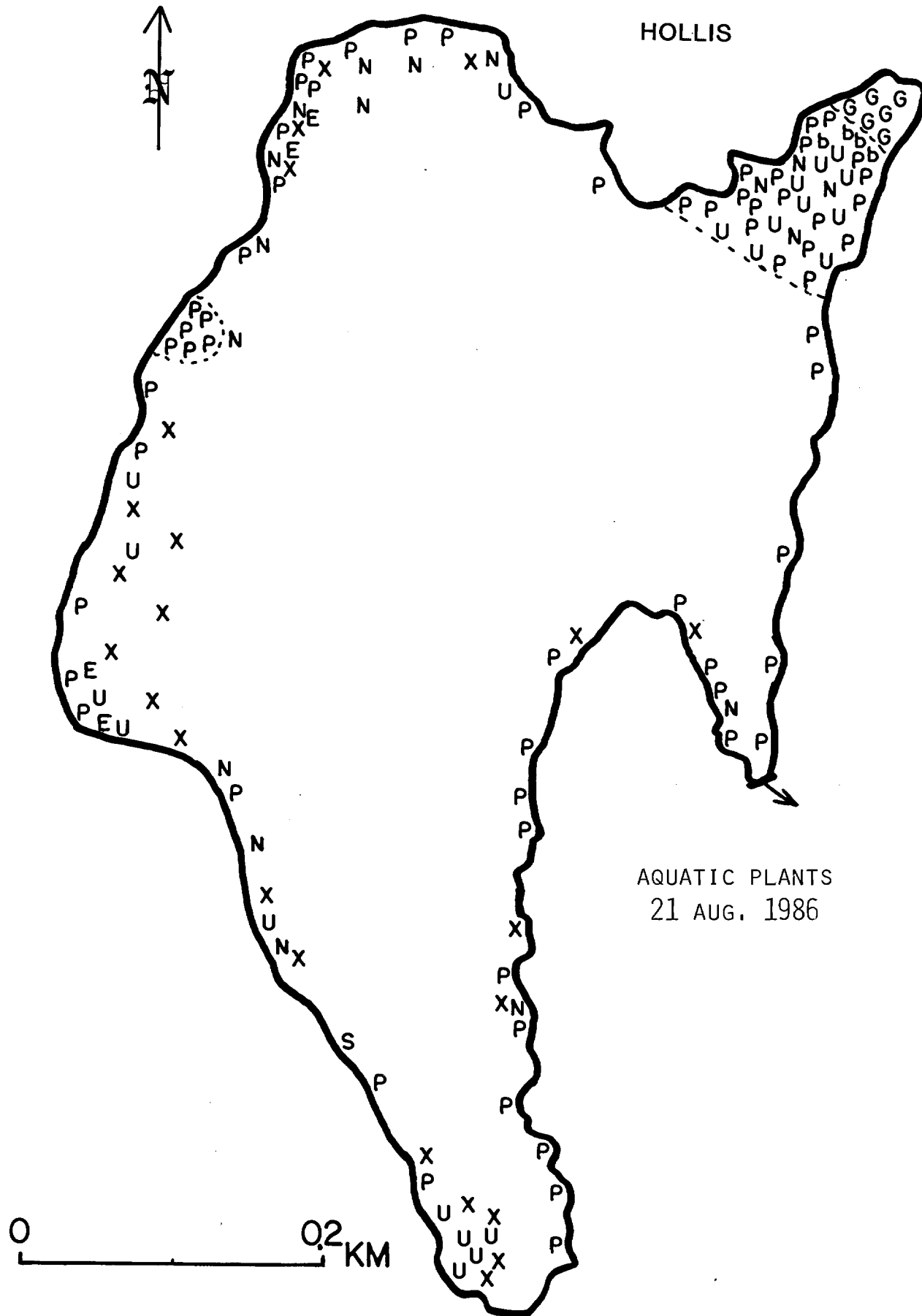
HOLLIS



Rough Bathymetric Chart
WSPCD - 1986
sounded by fathometer
5 foot isobaths

[illegible]

ROCKY POND



AQUATIC PLANT SURVEY

LAKE: ROCKY POND

TOWN: HOLLIS

DATE: 08/21/86

[illegible]

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. Chara and bladderwort came up with the anchor; they were probably over much of the bottom (Secchi disk was visible on bottom so sunlight penetrates to the bottom for plant growth).
2. Plants were abundant in the northeast cove.